



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,922	01/17/2001	Dan Dean Christensen	06005/36804	5557

7590

05/28/2004

Roger A. Heppermann
Marshal, O' Toole, Gerstein, Murray & Borun
6300 Sears Tower
233 South Wacker Drive
Chicago, IL 60606-6402

EXAMINER

DELGADO, MICHAEL A

ART UNIT

PAPER NUMBER

2144

DATE MAILED: 05/28/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,922

Applicant(s)

CHRISTENSEN ET AL.

Examiner

Michael S. A. Delgado

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Oath/Declaration

1. Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration.

A statement over applicant's signature providing a complete post office address is required.

The zip codes for applicants are missing.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-58 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,735,619 by Sawada.

In claim 1, Sawada teaches about a method for use in a process control system having a plurality of input/output (I/O) networks “Nodes”, the method comprising the steps of (Fig 10):

creating a first unique network identification tag “unique ID” for a first one of the I/O networks “node of lamp” (Col 5, lines 35-45);

creating a second unique network identification tag “unique ID” for a second one of the I/O networks “node of camera” (Col 5, lines 35-45);

storing the first network identification tag in a first device communicatively coupled to the first I/O network (Col 6, lines 20-30); (node information is stored on device to support Plug and Play operation associated with IEEE 1394)

storing the second network identification tag in a second device communicatively coupled to the second I/O network (Col 6, lines 20-30); (node information is stored on device to support Plug and Play operation associated with IEEE 1394)

making the first network identification tag available on the first network (Col 6, lines 20-30); (Information is made available during bus reset of IEEE 1394 devices)
and

making the second network identification tag available on the second network (Col 6, lines 20-30). (Information is made available during bus reset of IEEE 1394 devices)

In claim 2, Sawada teaches about a method of claim 1, wherein the step of creating the first unique network identification tag for the first I O network includes the steps of:

creating identification tags “unique IDs” for two or more devices (Camera , Lamp), wherein the devices are communicatively coupled to create a communication pathway from a user interface to the first I/O network “node” (Col 5, lines 35-45), (Col 6, lines 40-45); and

combining the identification tags for each of the two or more devices to create the first network identification tag “home device directory” (Col 9, lines 40-65). (Home device directory indicate the layout to the network as shown in fig 10 which is consistent with the specification)

In claim 3, Sawada teaches about a method of claim 2, wherein the step of combining the identification tags includes the step of concatenating the identification tag for each of the two or

Art Unit: 2144

more devices to create the first network identification tag (Col 9, lines 40-45). (Home device directory indicate the layout to the network as shown in fig 10 which is consistent with the specification)

In claim 4, Sawada teaches about a method of claim 2, further including the step of creating a unique identification tag for at least one of the two or more devices (Col 9, lines 40-45).

In claim 5, Sawada teaches about a method of claim 1, wherein the step of creating the first network identification tag for the first I/O network includes the steps of:

creating a first unique identification tag for a first device communicatively coupled to an user interface and to the first I/O network (Col 5, lines 35-45); and

using the first identification tag to create the first network identification tag (Col 9, lines 60-67). (Home device directory indicate the layout to the network as shown in fig 10, which is consistent with the specification).

In claim 6, Sawada teaches about a method of claim 5, wherein the step of creating the first unique identification tag for the first device "camera" includes the step of creating the first unique identification tag for a process controller "computer terminal" communicatively coupled to the user interface "gateway apparatus" and to the first I/O network (Fig 2A) (Col 5, lines 35-45). The computer terminal is higher up the hierarchy than the camera.

In claim 7, Sawada teaches about a method of claim 5, wherein the step of creating the first unique identification tag for the first device includes the step of creating the first unique identification tag for an I/O device communicatively coupled to the user interface and to the first network (Col 9, lines 45-60).

In claim 8, Sawada teaches about a method of claim 5, wherein the step of creating the first unique network identification tag for the first I/O network includes the steps of:

creating a second identification tag for a second device "lamp" communicatively coupled to the first device and to the first I/O network (Col 5, lines 35-45); and

using the second identification tag to create the first network identification tag (Col 9, lines 40-45).

In claim 9, Sawada teaches about a method of claim 8, wherein the step of creating the first network identification tag for the first I/O network includes the step of concatenating the first identification tag and the second identification tag to create the first network identification tag (Col 9, lines 55-67). (Home device directory indicate the layout to the network as shown in fig 10, which is consistent with the specification).

In claim 10, Sawada teaches about a method of claim 1, wherein the step of storing the first network identification tag in the first device communicatively coupled to the first I/O network includes the step of storing the first network identification tag in a process controller communicatively coupled to the first I/O network (fig 2a). (For communication between gateway apparatus and camera to be possible computer terminal has to know the address of the camera)

In claim 11, Sawada teaches about a method of claim 1, wherein the step of storing the first network identification tag in the first device communicatively coupled to the first I/O network includes the step of storing the first network identification tag in an I/O device

communicatively coupled to the first I/O network (Col 4, lines 35-40). (Storage gives the system the ability to retrieve information whenever it is needed and by locating the information in different locations does not take away from the spirit of the invention).

In claim 12, Sawada teaches about a method of claim 11, wherein the step of storing the first network identification tag in the I/O device communicatively coupled to the first I/O network includes the step of storing the first network identification tag in an I/O interface card communicatively coupled to the first I/O network (Col 4, lines 35-40). (Storage gives the system the ability to retrieve information whenever it is needed and by locating the information in different locations does not take away from the spirit of the invention).

In claim 13, Sawada teaches about a method of claim 11 wherein the step of storing the first network identification tag in the I/O device includes the step of storing, the first network identification tag in an I/O carrier communicatively coupled to the first I/O network (Col 4, lines 35-40). (Storage gives the system the ability to retrieve information whenever it is needed and by locating the information in different locations does not take away from the spirit of the invention).

In claim 14, Sawada teaches about a method of claim wherein the step of making the first network identification tag available on the first I/O network includes the step of transmitting the first network identification tag on the first I/O network in response to a request for the first network identification tag (Col 9, lines 40-55).

In claim 15, Sawada teaches about a method of claim 1, wherein the step of making the first network identification tag available on the first I/O network includes the step of periodically transmitting the first network identification tag on the first I/O network (Col 9, lines 50-60).

In claim 16, Sawada teaches about a method of claim 1, further including the steps of:
communicatively coupling a diagnostics tool and the first I/O network (Col 11, lines 30-50); and

accessing the first network identification tag via the diagnostic tool (Col 11, lines 30-50).
(The process of initialization in IEEE is a process of discovery, which makes it equivalent to a diagnostic tool).

In claim 17, Sawada teaches about a method of claim 16, wherein the step of accessing the first network identification tag includes the step of issuing a request for the first network identification tag on the first I/O network (Col 11, lines 45-55).

In claim 18, Sawada teaches about a method of claim 16, wherein the step of accessing the first network identification tag includes the step of listening for the first network identification tag on the first I/O network (Col 11, lines 35-50).

In claim 19, Sawada teaches about a method of claim 16, further including the step of identifying communication protocol for the first I/O network (Col 10, lines 10-15). (The information in the configuration ROM indicates the capability of the device, which can only be operated by knowing the assigned protocol).

Art Unit: 2144

In claim 20, Sawada teaches about a method of claim 16 further including the steps of:
interpreting the received first network identification tag (Col 11, lines 45-50); and
providing an indication representative of the identity of the first I/O network on the
diagnostic tool (Col 11, lines 30-40),(Fig 10).

In claim 21, Sawada teaches about a method of claim 20, wherein the step of providing
the indication representative of the identity of the first I/O network includes the step of
displaying the first network identification tag on the diagnostic tool (Col 9, lines 55-67)(Fig 10).

In claim 22, Sawada teaches about a method of claim 20, wherein the step of providing
the indication representative of the first I/O network includes the step of displaying the first I/O
network within a configuration diagram (Col 9, lines 55-67) (Fig 10).

In claim 23, Sawada teaches about a method of claim 16, further including the steps of:
accepting a user provided network identifier “device name” for a selected I/O network as
an input (Col 10, lines 15-20);
storing the user provided network identifier (Col 10, lines 15-20);
receiving the first network identification tag from the first I/O network (Col 9, lines 50-
60);
comparing the identity of the I/O network associated with the user provided
network identifier with the identity of the I/O network associated with the first network
identification tag (Col 7, lines 30-40); (This task is done by the mapping table)
generating a first indication if the identity of the I/O network associated with

Art Unit: 2144

the first network identification tag matches the identity of the I/O network associated with the user provided network identifier (Col 11, lines 30-50); (This is an attachment)and

generating a second indication if the identity of the I/O network associated with first network identification tag does not match the identity of the I/O network associated with the user provided network identifier (Col 11, lines 30-50). (This is a detachment)

In claim 24, Sawada teaches about a process control system comprising:

a user interface “gateway apparatus” (Fig 2A), (Col 5, lines 35-45);

one or more process controllers “IEEE 1394 controller” communicatively coupled to the user interface and to a plurality of I/O networks including a first I/O network and a second I/O network (Col 5, lines 35-45) (Fig 3, 58, 26);

a first unit “camera” communicatively coupled to the first I/O network and adapted to make a first unique network identification tag “unique ID” available on the first I/O network (Col 5, lines 35-45); and

a second unit “lamp” communicatively coupled to the second UO network and adapted to make a second unique network identification tag available on the second I/O network (Col 5, lines 35-45).

In claim 25, Sawada teaches about a process control system of claim 24, wherein the first unit includes a routine adapted to be implemented on a processor to create the first network identification tag (Col 9, lines 40-45).

In claim 26, Sawada teaches about a process control system of claim 24, wherein the first unit includes a routine adapted to be implemented on a processor to ascertain identification tags for each of two or more devices, wherein the two or more devices are communicatively coupled to create a communication pathway from the user interface to the first I/O network (Col 9, lines 55-65). (Home device directory indicate the layout to the network as shown in Fig 10 which is consistent with the specification)

In claim 27, Sawada teaches about a process control system of claim 26, wherein the routine combines the identification tags for each of the two or more devices to create the first network identification tag. (Col 9, lines 55-65). (Home device directory indicate the combine layout to the network as shown in Fig 10, which is consistent with the specification).

In claim 28, Sawada teaches about a process control system of claim 27, wherein the routine concatenates the identification tags for each of the two or more devices to create the first network identification tag (Col 9, lines 55-65). (Home device directory indicate the layout to the network as shown in Fig 10 which is consistent with the specification)

In claim 29, Sawada teaches about a process control system of claim 24, wherein the first unit includes a routine adapted to be implemented on a processor to ascertain a first unique identification tag for a first device communicatively coupled to the user interface and to the first I/O network and to use the first identification tag to create the first network identification tag (Col 9, lines 40-45).

In claim 30, Sawada teaches about a process control system of claim 29, wherein the first device comprises one of the one or more process controllers (Fig 3,26).

In claim 31, Sawada teaches about a process control system of claim 29, wherein the first device comprises an I/O device (Fig 3, 28).

In claim 32, Sawada teaches about a process control system of claim 29, wherein the routine ascertains a second identification tag for a second device communicatively coupling the first device to the I/O network and uses the second identification tag to create the second network identification tag (Col 9, lines 55-67). (Home device directory indicate the combined layout to the network as shown in fig 10 which is consistent with the specification)

In claim 33, Sawada teaches about a process control system of claim 32, wherein the routine combines the first identification tag and the second identification tag to create the first network identification tag (Col 9, lines 55-67). (Home device directory indicate the combined layout to the network as shown in fig 10 which is consistent with the specification)

In claim 34, Sawada teaches about a process control system of claim 33, wherein the routine concatenates the first identification tag and the second identification tag to create the first network identification tag "index.html" (Fig 10).

In claim 35, Sawada teaches about a process control system of claim 24, wherein the first unit comprises a memory (Fig 3,74) and a routine adapted to be implemented on a processor within one of the one or more process controllers (Fig 3, 26, 28).

In claim 36, Sawada teaches about a process control system of claim 24, wherein the first unit includes an I/O device communicatively coupled to the first I/O network (Fig 3, 28).

In claim 37, Sawada teaches about a process control system of claim 36, wherein the I/O device comprises an I/O interface "IEEE 1394 physical layer I/O" (Fig 3, 36a).

In claim 38, Sawada teaches about a process control system of claim 36, wherein the I/O device comprises an I/O carrier (IEEE 1394 control bus) (Fig 3,1).

In claim 39, Sawada teaches about a process control system of claim 2-1, wherein the first unit includes a routine adapted to be implemented on a processor to make the first network identification tag available on the first I/O network in response to a request for the first network identification tag on the first I/O network (Col 9, lines 25-40).

In claim 40, Sawada teaches about a process control system of claim 24, wherein the first unit includes a routine adapted to be implemented on a processor to make the first network identification tag available on the first I/O network on a periodic basis (Col 9, lines 25-40).

In claim 41, Sawada teaches about a process control system of claim 24, wherein the first I/O network comprises a bus (IEEE 1394 data bus) (Fig 3,1).

In claim 42, Sawada teaches about a process control system of claim 24, wherein the first I/O network comprises a bus adapted to support multiplexed communications (Fig 3,1). (Bus multiplex between command and data signals)

In claim 43, Sawada teaches about a process control system of claim 24, further including a diagnostic tool adapted to be communicatively coupled to the first I/O network and includes a routine adapted to be implemented on a processor to access the first network identification tag on the first I/O network (Col 11, lines 30-50). (The process of initialization in IEEE is a process of discovery, which makes it equivalent to a diagnostic tool).

In claim 44, Sawada teaches about a process control system of claim 24, wherein the routine issues a request for the first network identification tag on the first I/O network (Col 11, lines 30-50).

In claim 45, Sawada teaches about a process control system of claim 43, wherein the routine listens for the first network identification tag on the first I/O network (Col 11, lines 30-50).

In claim 46, Sawada teaches about a process control system of claim -1. 3, wherein the routine identifies the communication protocol for the first I/O network (Col 10, lines 10-15). (The information in the configuration ROM indicates the capability of the device, which can only be operated by having knowledge of the protocol).

In claim 47, Sawada teaches about a process control system of claim 43, wherein the routine interprets the first network identification tag received on the I/O network and provides an

Art Unit: 2144

indication identifying the first I/O network on the diagnostic tool (An attachment)(Col 11, lines 45-50).

In claim 48, Sawada teaches about a process control system of claim 47, wherein the routine displays the first network identification tag on the diagnostic tool (Fig 10).

In claim 49, Sawada teaches about a process control system of claim 47, wherein the routine displays the identity of the first I/O network within a configuration diagram (Fig 10).

In claim 50, Sawada teaches about a diagnostic tool for identifying a selected I/O network in a process control system having a plurality of I/O networks, wherein a device communicatively coupled to the selected I/O network is adapted to make a network identification tag available on the selected I/O network, the diagnostic tool comprising (Col 11, lines 30-50) (The process of initialization in IEEE is a process of discovery which makes it equivalent to a diagnostic tool):

a port adapted to be communicatively coupled to the selected I/O network (Fig 3, 1);

a computer readable memory (Fig 3, 52);

a processor (Fig 3,50);

a first routine stored on the computer readable memory and adapted to be implemented on the processor to receive the network identification tag from the selected I/O network "Nodes" (Col 6, lines 20-30); and

a second routine stored on the computer readable memory and adapted to be implemented on the processor to identify the selected I/O network based on the received network identification tag (Col 6, lines 20-30).

In claim 51, Sawada teaches about a diagnostic tool of claim 50, wherein the first routine issues a request for the network identification tag over the selected I/O network (Col 6, lines 20-30).

In claim 52, Sawada teaches about a diagnostic tool of claim 50, wherein the first routine listens for the network identification tag being periodically transmitted on the selected I/O network (Col 6, lines 20-30).

In claim 53, Sawada teaches about a diagnostics tool of claim 50, further including a third routine stored on the computer readable memory and adapted to be implemented on the processor to identify a communication protocol used on the selected I/O network (Col 10, lines 10-15). (The information in the configuration ROM indicates the capability of the device, which can only be operated by knowing the protocol).

In claim 54, Sawada teaches about a diagnostics tool of claim 50, further including a third routine stored on the computer readable memory and adapted to be implemented on the processor to provide an indication representative of the identity of the selected I/O network (Fig 10). The layout of the network is display

In claim 55, Sawada teaches about a diagnostics tool of claim 54, wherein the third routine displays the received network identification tag on the diagnostic tool (Fig 10).

In claim 56, Sawada teaches about a diagnostic tool of claim 54, wherein the third routine displays the identity of the I/O network associated with the received network identification tag using a configuration diagram (Fig 10).

In claim 57, Sawada teaches about a diagnostic tool of claim 54, wherein the third routine identifies the I/O network associated with the received network identification tag using a network configuration database “mapping table”(Col 7, lines 30-40).

In claim 58, Sawada teaches about a diagnostics tool of claim 50, further including:
a third routine stored on the computer readable memory and adapted to be implemented on the processor to accept an indication of one of the plurality of I/O “nodes” networks as an input (Col 6, lines 20-30);

a fourth routine stored on the computer readable memory and adapted to be implemented on the processor to compare the identity of the I/O network associated with the network identification tag received front the selected I/O network with identity of the I/O network associated with the indication of the one of the plurality of the I/O networks (Col 11, lines 30-50): (Inherently there has to be some comparing to decide if there is an attachment or detachment)

a fifth routine stored on the computer readable memory and adapted to be implemented on the processor to generate a first indication if the identity of the I/O network associated with the network identification tag received from the selected I/O network matches the identity of the I/O network associated with the indication of the one plurality of I/O networks (an attachment) (Col 11, lines 30-50); and

a sixth routine stored on a computer readable memory and adapted to be implemented on the processor to generate a second indication if the identity of the I/O network associated with the network identification tag received from the selected I/O network does not match the identity of the I/O network associated with the indication of the one of the plurality of I/O networks (a detachment) (Col 11, lines 30-50).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,405,103 by Ryan et al, teaches about a computer program for controlling domestic appliances, generated tag name comprising concatenation of area and description field and item comprising address field contents.

US Patent No. 5,980,078 by Krivoshein et al, teaches about a process control system including automatic sensing and automatic configuration of devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael S. A. Delgado whose telephone number is 703-305-8057. The examiner can normally be reached on 7.30 AM - 5.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM A CUCHLINSKI JR can be reached on (703)308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Application/Control Number: 09/761,922
Art Unit: 2144

Page 18

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MD
May 21, 2004



DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100